

## ABSTRAK

### **PENGARUH EKSTRAK KULIT MANGGIS (*Garcinia mangostana* L.) SEBAGAI GROWTH PROMOTER TERHADAP PERFORMA PERTUMBUHAN AYAM BROILER**

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Peternakan ayam broiler merupakan usaha yang memiliki potensi menguntungkan secara ekonomi. *Antibiotic Growth Promotor* (AGP) sering digunakan sebagai imbuhan pakan untuk meningkatkan performa pertumbuhan ayam. Penggunaan AGP memicu terjadinya *Antimicrobial Resistance* (AMR), sehingga pemerintah menerbitkan larangan penggunaan AGP. Larangan tersebut menyebabkan perlunya ditemukan alternatif pengganti AGP sebagai imbuhan pakan peningkat performa pertumbuhan ayam. Kulit buah manggis (*Garcinia mangostana* L.) mengandung senyawa xanton dan derivat xanton yang memiliki aktivitas antimikroba, anti-inflamasi, antioksidan, dan imunomodulator, sehingga berpotensi untuk dijadikan alternatif pengganti AGP. Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak kulit manggis sebagai imbuhan pakan terhadap performa pertumbuhan ayam broiler. Pada penelitian ini digunakan 45 ekor ayam broiler strain Cobb500 yang dibagi menjadi kelompok A (kontrol), kelompok B (colistin), dan kelompok C (ekstrak kulit manggis 2%). Ayam dipelihara dan diberi perlakuan sesuai kelompoknya selama 30 hari. Berat badan dan konsumsi pakan ayam ditimbang setiap hari. Data berat badan ayam, penambahan berat badan ayam, dan *Feed Conversion Rate* (FCR) dianalisis secara deskriptif dan statistik. Berat badan ayam per minggu dianalisis menggunakan Uji ANOVA Dua Arah dan penambahan berat badan dan FCR kumulatif ayam dianalisis menggunakan Uji Kruskal-Wallis. Rata-rata berat badan ayam broiler di hari ke 30 pada kelompok A adalah 1246,8 gram, kelompok B 1283,87 gram, dan kelompok C 1229,87 gram. Rata-rata FCR keseluruhan kelompok A adalah 1,48, kelompok B 1,41, dan kelompok C 1,44. Kesimpulan dari hasil analisis statistik menunjukkan bahwa ekstrak kulit manggis tidak memiliki pengaruh yang signifikan terhadap penambahan berat badan dan FCR ayam broiler dibandingkan dengan AGP dan kontrol negatif.

**Kata Kunci:** Ayam broiler, berat badan, *Feed Conversion Rate* (FCR), ekstrak kulit manggis *Garcinia mangostana* L.

## ***ABSTRACT***

### **THE EFFECT OF MANGOSTEEN PERICARP EXTRACT (*Garcinia mangostana* L.) AS GROWTH PROMOTER ON BROILER GROWTH PERFORMANCE**

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Broiler farm is a business with high economic potential. Antibiotic Growth Promotor (AGP) is often used as feed additive to improve broiler growth performance. The use of AGP has led to Antimicrobial Resistance (AMR). This problem led to governmental ban on the use of AGP, and therefore a healthier substitute for AGP is needed. Mangosteen pericarp (*Garcinia mangostana* L.) contains xanton and its derivatives, which are proven to have growth-promoting properties such as antimicrobial, anti-inflammation, antioxidant, and immunomodulatory, giving it a potential to be used as an alternative growth promoter to replace AGP. This study aims to determine the effect of mangosteen pericarp extract as growth promoter on broiler growth performance. In this study 45 Cobb500 strain broiler chickens were used which were divided into group A (control), group B (colistin), and group C (2% mangosteen peel extract). Chickens were reared and treated according to their groups for 30 days. Body weight and feed consumption of chickens were weighed every day. The body weight and feed intake were measured daily. The body weight, body weight gain, and Feed Conversion Rate (FCR) data were analyzed descriptively and statistically. The weekly body weight data was analyzed using Two-Way Analysis of Variance (ANOVA) Test. The cumulative body weight gains and cumulative FCR were analyzed using Kruskal-Wallis Test. The average body weight of broiler chickens on day 30 in group A was 1246,8 grams, group B 1283,87 grams, and group C 1229,87 grams. The average FCR for group A was 1,48, group B 1,41, and group C 1,44. The conclusion of the statistical analysis showed that the mangosteen pericarp extract did not have a significant impact to the broilers' body weight gain and FCR in comparison to the control and colistin groups.

**Key words:** Broiler chicken, body weight, Feed Conversion Rate (FCR), mangosteen pericarp extract (*Garcinia mangostana* L.)